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AN ENERGY STAR BUILDINGSSM AND GREEN LIGHTS[®] CASE STUDY FOR Delaware State University

Project Director

David Mosby,
Assistant Vice President for Facilities

Partner Since

1996

Total Committed Square Footage

1 million

Location

Dover, DE

"We were pleased with the assistance we received in implementing our energy upgrades. By improving our energy efficiency and making the building more comfortable, we are enhancing the educational experience for our students. In addition, the partnership has gone beyond our expectations in cost savings, giving us more resources."

– David Mosby,
Assistant Vice President for Facilities

Delaware State University is reaping benefits from its involvement in the U.S. Environmental Protection Agency's (EPA) ENERGY STAR BuildingsSM and Green Lights[®] Partnership in ways it never imagined.



Not only is the university helping the environment and increasing building comfort for students and faculty, it exceeded its guaranteed annual savings and realized \$124,633 in extra revenue in 1997, all as a result of its energy-efficient upgrades.

Delaware State University joined the Green Lights Partnership in 1995. In just two years, the university upgraded to T8 fluorescent lamps, fluorescent exit signs, and installed high-efficient exterior lighting, as part of its Green Lights commitment.

Based on the success of the lighting upgrades, Delaware State University joined EPA's ENERGY STAR Buildings Partnership in 1997 to expand its energy-efficiency efforts. The ENERGY

		Progress to Date
Project Costs	Total Expenditures	N/A
	Dollars Per Square Foot	N/A
	Total Square Footage Upgraded	850,000
	Percent Upgraded	85%
Cost Savings	Annual Dollar Savings	\$648,133
	Dollar Savings Per Square Foot	\$0.15
	Internal Rate of Return (IRR)	32%
Energy Savings	Annual kWh Savings	1,659,582
Pollution Prevention	Annual Carbon Dioxide (lbs.)*	3,241,291
	Equivalent Cars off the Road	324
	Equivalent Acres of Trees Planted	444

* Pounds of carbon dioxide reflect reduction in the consumption of oil, gas, and coal, as well as electricity.



STAR Buildings Partnership includes a five-stage strategy for upgrading whole-building operating efficiency.

Aside from being a stand-alone energy-efficiency program, Green Lights is also the first stage of the ENERGY STAR Buildings Partnership. Completing its lighting upgrades through its Green Lights agreement, the university went on to develop a new energy management control system under an operational maintenance contract with ENERGY STAR Buildings Ally Honeywell Controls for stage two of the Partnership. Stage three and four involve other load reductions and fan system upgrades. For these stages, the university replaced windows in several of its buildings with ones that are more energy-efficient, and installed new motors. The last stage of the Partnership involves heating and cooling improvements. To date, the university has replaced a boiler in one of its dormitories and a chiller with new, high-efficiency equipment. It also has replaced window air conditioning units in its pilot building with more efficient central air conditioning.

The university is financing its upgrades through a 5-year performance contract with Honeywell Controls. Under this agreement, Honeywell pays for the upgrades, and then is reimbursed from the university's energy savings. Honeywell guaranteed Delaware State University energy and operational savings of \$523, 500. In 1997, Delaware State University's combined energy and operational savings totaled \$648,133, exceeding Honeywell's projections.

Delaware State University is the first historically black college to join the Energy Star Buildings Partnership, and was recognized in the summer 1997 ENERGY STAR Buildings and Green Lights Update, "Our Schools and Universities Have Made the Grade" for its energy-efficiency accomplishments.

To encourage other historically black universities and colleges to follow in its foot steps, Delaware State University hosted an Energy Fair in fall 1998 to discuss its successes in the

EPA's ENERGY STAR Buildings and Green Lights Partnership with interested educational institutions.

By performing energy-efficient upgrades, the Delaware State University is not only saving a tremendous amount of money in energy and operational costs, but also is making its buildings more comfortable, and helping the environment. The installation of energy-efficient lighting and building technologies reduces the amount of air pollutants emitted into the community.